UNPACKING

AND

Congratulations on Your Purchase!

Your new DVD Video Player is designed to deliver maximum enjoyment and years of trouble free service.

Please take a few moments to read this manual thoroughly. It will explain the features and operation of your unit and help ensure a trouble free installation.

Please unpack your unit carefully. We recommend that you save the carton and packing material. They will be helpful if you ever need to move your unit and may be required if you ever need to return it for service. Your unit is designed to be placed in a horizontal position and it is important to allow at least two inches of space behind your unit for adequate ventilation and cabling convenience.

To avoid damage, never place the unit near radiators, in front of heating vents, in direct sunlight, in excessively humid, dusty locations or near sources of strong magnetic fields. Connect your complementary components as illustrated in the following section.



CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CLASS 1 LASER PRODUCT

CAUTION

Invisible laser radiation when the unit is open. Do not stare into beam.

CAUTION: USE OF ANY CONTROLS, ADJUSTMENTS, OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

FOR U.S.A

■FCC INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

PRECAUTIONS

- Moisture condensation
 - Moisture may form on the lens in the following conditions.
- Immediately after a heater has been turned on.
- In a steamy or very humid room.
- When this unit is moved from a cold place to a warm one.
 If moisture forms inside this unit, it may not operate properly.
- In this case, turn on the power and wait about one hour for the moisture to evaporate.
- If there is noise interference on the TV while a broadcast is being received.
- Depending on the reception condition of the TV, interference may appear on the TV screen while you are watching a TV broadcast and this unit is left on. This is not a malfunction of this unit or the TV. To watch a TV broadcast, turn off this unit.
- Do not transport this unit with discs left in it.
- Do not place on the component such as amplifier or receiver that generates heat.
 - If so, the temperature inside this unit rises and malfunction may occur.

READ THIS BEFORE OPERATING

FOR U.S.A AND CANADA..... 120 V

FOR YOUR SAFETY

Units shipped to the U.S.A and Canada are designed for operation on 120 V AC only.

Safety precaution with use of a polarized AC plug. However, some products may be supplied with a nonpolarized plug.

CAUTION: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

ATTENTION: Pour eviter les choc electriques, introduire la lame la plug large de la borne correspondante de la prise et poussre jusqu'au fond.

FOR CHINA, EUROPE, AUSTRALIA AND OTHER COUNTRIES 100V - 240 V

FOR YOUR SAFETY

The available power supply voltage differs according to country or region. However, this unit is equipped with an Automatic Voltage Selector.

The power supply voltage of the area where the unit will be used automatically meets the required voltage within the range of AC 100 - 240 V, without any manual voltage adjustment.

To ensure safe operation, the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring. Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth.

Improper extension cords are a major cause of fatalities. The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

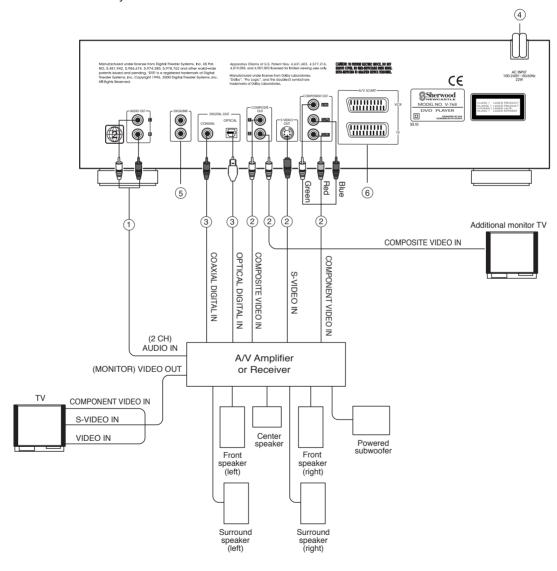
CONTENTS

Introduction	
UNPACKING AND INSTALLATION	
READ THIS BEFORE OPERATING YOUR UNIT	3
System Connections	
CONNECTING TO A/V AMPLIFIER OR RECEIVER	5
CONNECTING TO TV WITH AUDIO AND VIDEO INS	7
CONNECTING SYSTEM CONTROL	7
CONNECTING TO TV AND VCR WITH SCART CONNECTORS(Regional Option)	8
Front Panel & Remote Controls	9
• REMOTE CONTROL OPERATION RANGE	11
• LOADING BATTERIES	11
Preliminary Knowledge About Discs	
PLAYABLE DISC TYPES	12
NOTES ON DVD VIDEOS	12
NOTES ON COPYRIGHT	12
SYMBOL ABOUT INVALID OPERATION	13
CARE AND HANDLING OF DISCS	
Operations	
BASIC PLAYBACK	14
DISPLAYING DISC INFORMATION DURING PLAYBACK	18
• PLAYING THE DESIRED SECTION OF DISC (TITLE/CHAPTER/TIME SEARCH : DVD Video/CD only)	19
PLAYING A SPECIFIC ITEM [DVD Video only]	
• REPEAT PLAYBACK	
PLAYING TRACKS IN DESIRED ORDER [CD only]	22
PLAYING TRACKS IN RANDOM ORDER [CD/MP3 disc only]	
CHANGING THE AUDIO LANGUAGE [DVD Video only]	
CHANGING THE SUBTITLE LANGUAGE [DVD Video only]	
CHANGING THE CAMERA ANGLE [DVD Video only]	
PLAYING A SCENE CLOSE-UP [DVD Video only]	
• CHANGING THE VIDEO SIGNAL FORMAT	
CHANGING THE COMPONENT VIDEO OUTPUT SIGNAL	
• LISTENING WITH HEADPHONES	
nitial Settings	28
• SETTING THE LANGUAGE SETUP	
• SETTING THE VIDEO SETUP	
• SETTING THE AUDIO SETUP	
• SETTING THE CUSTOM SETUP	
• SETTING THE OTHERS	
Definition Of Terms	42
Troubleshooting Guide	43
Specifications	44
DVD Language Code List	45

- Do not connect the AC input cord into the AC outlet when plugging and unplugging connection cords.
- Since different components often have different terminal names, carefully read the operating instructions of the component connected.
- Be sure to observe the color coding when connecting audio and video cords.

CONNECTING TO A/V AMPLIFIER OR

- Some TVs or monitors are equipped with COMPONENT VIDEO INs that are capable of reproducing a
 progressively scanned video signal. Connecting to these INs allows you to view high-density pictures with less
 flickers
- When DVD Videos recorded in Dolby Digital, DTS or MPEG II are played, Dolby Digital, DTS or MPEG bitstream signals can be output from the DIGITAL OUTs of this unit. If the COAXIAL or OPTICAL DIGITAL OUT of this unit is connected to an external Dolby Digital, DTS or MPEG II decoder or an amplifier with built-in decoder, you can enjoy theater-quality audio in your home.
- The supplied cords are a(stereo) audio cord, a composite video cord and a system control cord only. Other cords are commercially-available cords.



1. Connecting AUDIO OUTs

Connect these jacks to the AUDIO INs of DVD(, AUX, CD, etc.) of your amplifier or receiver.

Note:

 While playing a multi channel (5.1 channel) program source recorded in Dolby Digital, DTS, etc., the 5 discrete channels(front L/R, center and surround L/R) are mixed down to these front and headphone channels. In this case, you can hear sound from the front speakers and headphones.

2. Connecting VIDEO OUTs

The COMPONENT VIDEO OUTs of this unit are capable of outputting either conventional interlacing video signal or progressively scanned video signal(that can reproduce high-density pictures with less flicker).

- According to VIDEO OUTs, the excellence in picture quality is as follows:
- Progressive "COMPONENT" > Interlaced "COMPONENT" > "S-VIDEO" > "COMPOSITE"
- When making COMPONENT VIDEO connections, connect "Y/PY" to "Y", "Cb/Pb" to "Cb"(, "Pb", "B-Y"), "Cr/Pr" to "Cr"(, "Pr", "R-Y").
- Depending on the type of the COMPONENT VIDEO INs of TV, be sure to set the COMPONENT OUT to the corresponding setting. (Refer to "When selecting the COMPONENT OUT" on page 33 or "CHANGING THE COMPONENT VIDEO OUTPUT SIGNAL" on page 26.)
- If there are both VIDEO INs and (MONITOR) VIDEO OUTs on your amplifier or receiver, connect these jacks to the corresponding VIDEO IN jacks of your amplifier or receiver and (MONITOR) VIDEO OUT jacks of that to the corresponding VIDEO IN jacks of the TV respectively.
- If there are no VIDEO jacks, connect these jacks to the TV directly. (Refer to "CONNECTING TO TV WITH AUDIO AND VIDEO INS" on the next page.)
- You can connect the COMPOSITE VIDEO 2 jack to an additional monitor TV.

Notes:

- When the COMPONENT OUT is set to PROGRESSIVE, the S-VIDEO and COMPOSITE VIDEO OUTs can not output the normal video signals. Therefore, it causes the picture to break up and shake.
- When the progressive video signals are input into the non-progressive COMPONENT VIDEO INs of your TV, the picture may not be shown normally, too.
 Therefore, when the progressive COMPONENT VIDEO INs of TV are not connected to, you should set the COMPONENT OUT to INTERLACED.
- Do not connect the unit to the TV through a VCR. Otherwise the picture may be disturbed due to the copy protection function.

3. Connecting DIGITAL OUTs

You can enhance the sound quality by connecting these COAXIAL and OPTICAL DIGITAL OUTs to the corresponding DIGITAL INs of an amplifier, MD recorder, etc.

The digital audio signal from a disc is directly transferred. If you connect to a DTS, Dolby Digital or MPEG-II decoder or an amplifier with built-in decoder, you can enjoy theater-quality audio in your home.

Notes

- When you connect the audio equipment with a digital input, before using, set the AUDIO SETUP correctly according to the connected audio equipment with a digital input.
 When the AUDIO SETUP is not set correctly, loud noise or no sound may be heard from the speakers, and it may be harmful to your ears and damages the speakers.(Refer to "SETTING THE AUDIO SETUP" on page 35.)
- When you connect the MD or CD recorder with a digital input for digital recording, the LPCM SELECT should be set to LPCM 48K. If not, the digital recording do not perform properly. (Refer to "SETTING THE AUDIO SETUP" on page 35.)
- When making the COAXIAL DIGITAL connection, be sure to use a 75 Ω COAXIAL cord, not a conventional AUDIO cord.
- All of the commercially-available optical fiber cords cannot be used for audio equipments. If there is an optical fiber cord which cannot be connected to your audio equipments, consult your dealer or nearest service organization.

■Audio output from the unit's DIGITAL OUTs

Disc	Audio recording format	Audio output
	Dolby Digital	Dolby Digital bitstream (2~5.1ch) or PCM(48 kHz/16bit) (2ch) (Note 1)
DVD Video	DTS	DTS bitstream or PCM(48 kHz/ 16 bit) (2ch) (Note 1)
	MPEG-II	MPEG bitstream or PCM(48 kHz/ 16 bit) (2ch) (Note 1)
	Linear PCM (48/96 kHz, 16/20/24bit)	Linear PCM (48 kHz/16bit) (2ch) (Note 2) or original signal
CD/ MP3 disc	Linear PCM	Linear PCM (44.1 kHz)

- Note 1 : The type of audio output from the DIGITAL OUTs can be selected by the DIGITAL OUT settings.
- Note 2 : Sound having 96 kHz sampling is converted into 48 kHz sampling when it is output from the unit's DIGITAL OUTs.(Refer to "SETTING THE AUDIO SETUP" on page 35.)
- Linear PCM is a signal recording format used in music CDs.
 While music CDs are recorded in 44.1 kHz/16 bit, DVD
 Videos are recorded in 48 kHz/16 bit to 96 kHz/24 bit.

4. AC INPUT CORD

Plug this cord into a wall AC outlet.

5. DIGI LINK JACKs

Refer to "CONNECTING SYSTEM CONTROL" on the next page.

6. A/V SCART CONNECTORs (Regional Option)

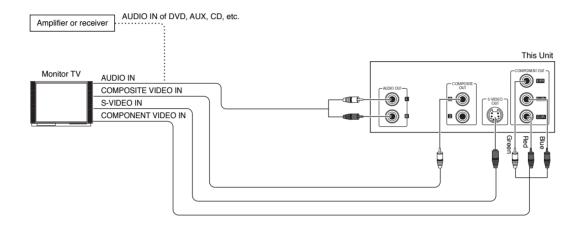
Refer to "CONNECTING TO TV AND VCR WITH SCART CONNECTORS(Regional Option)" on page 8.

CONNECTING TO TV WITH AUDIO AND

- · You can enjoy DVD Videos by simply connecting this unit to a TV. To hear improved audio sound quality, connect the AUDIO OUTs to the AUDIO INs of DVD(, AUX, CD, etc.) of your amplifier or receiver.
- To connect these jacks correctly, refer to "Connecting AUDIO OUTs" and "Connecting VIDEO OUTs" on the previous page.

Notes:

- If your TV has a monaural audio input instead of stereo, you need to use an optional audio cord which converts stereo audio output to monaural.
- Do not connect the VIDEO OUTs of the unit to the TV through a VCR. Otherwise the image may be disturbed due to the copy protection function.

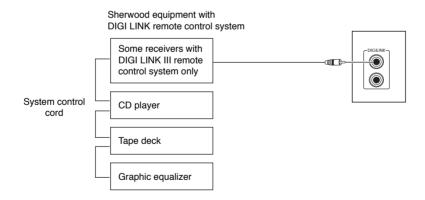


CONNECTING SYSTEM

 Connect this jack to the DIGI LINK jack of some Sherwood receivers such as RD-7108/R, RD-8108/R, R-863/R, R-963/R, etc. that uses the DIGI LINK III remote control system. (For details, refer to the operating instructions of that.)

Note:

• When the remote control units of some Sherwood receivers do not have function buttons for DVD player, you cannot operate this unit with those.

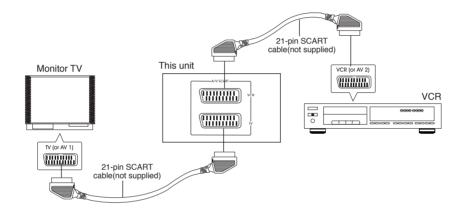


CONNECTING TO TV AND VCR WITH SCART

- For some countries like Europe, the unit incorporates the TV and VCR SCART connectors.
- You can connect the unit to TV and VCR easily using the SCART connections without other cumbersome audio and video connections.
- During operation of the unit, these connectors can deliver either the COMPOSITE(regular) video or the S-VIDEO (Y and C) signals as well as the audio L and R signals.
- To obtain the highest picture quality, you can make the COMPONENT VIDEO connections between the unit and TV.
- Depending on the video signal(s) to be used, adjust the SCART OUT settings to your preference and set your TV and VCR to the corresponding one to match the selected settings of the unit.
 (Refer to "When selecting the SCART OUT(Regional Option)" on page 33 and the operating instructions of the component(s) connected.)

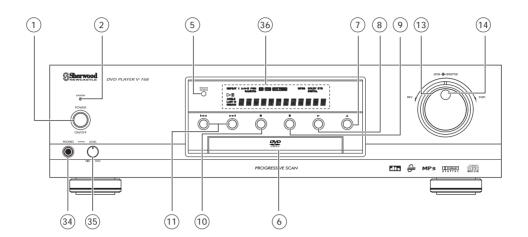
Note:

• In this connection, do not connect the unit to the TV through a VCR. Otherwise the image may be disturbed due to the copy protection function.

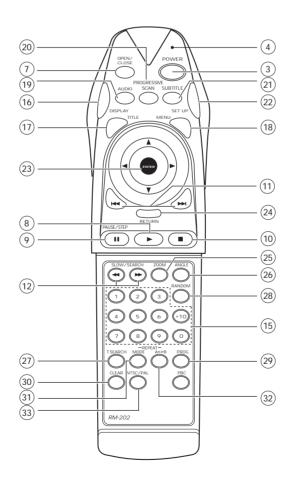


• In this connection, to view a program source from the VCR on the TV screen or to record a TV broadcast onto the VCR, be sure to turn the unit off to enter the standby mode.

Front Panel Controls



Remote Controls



1. POWER SWITCH

Press to turn the power of the unit from power off to standby on or vice versa.

2. STANDBY INDICATOR

Lights up in the standby mode and goes off in power on mode

3. POWER BUTTON

Press to turn the power of the unit from power on to standby or vice versa.

4. LED LAMP

5. REMOTE SENSOR

6. DISC TRAY

Load a disc to be played on the tray.

7. OPEN/CLOSE (▲) BUTTON

Press to open or close the disc tray.

8. PLAY (▶) BUTTON

Press to start playback.

9. PAUSE/STEP (■) BUTTON

Press to pause playback temporarily.

 In the still picture mode, press to advance the picture of DVD Videos frame by frame.

10. STOP (■) BUTTON

Press to stop playback.

11. FORWARD/BACKWARD(▶► / ◄) SKIP BUTTONS

Press either button to skip chapters / tracks / songs or to locate the beginning of a chapter / track / song.

12. FORWARD/BACKWARD(►►/ ◄) SLOW/SEARCH BUTTONS

Press either button to advance or reverse the disc at various speeds.

13. SHUTTLE RING

Rotate in either direction to advance or reverse the disc fast.

14. JOG DIAL

In the sill picture mode, rotate in either direction to advance or reverse the picture of DVD Video frame by frame.

15. NUMERIC (0~9, + 10) BUTTONS

Press to enter a title or chapter number, etc. for direct input of it.

16. DISPLAY BUTTON

Press to display information about the disc currently playing.

17. TITLE BUTTON

Press to display the title menu of DVD Video on the TV screen.

18. MENU BUTTON

Press to display a menu of DVD Video on the TV screen.

19. AUDIO BUTTON

Press to select the audio language or sound during playback of a DVD Video .

20. PROGRESSIVE SCAN BUTTON

Press to select the right component video output signal corresponding to the type of the COMPONENT VIDEO INs of TV.

21. SUBTITLE BUTTON

Press to select the subtitle language and to turn the display of subtitle on or off during playback of a DVD Video .

22. SETUP BUTTON

Press to adjust the unit's settings on the TV screen in the stop mode.

23. CURSOR(▲/▼/◀/▶) / ENTER BUTTON

Tilt in the desired direction to select an item in the onscreen display or title menus or menus of DVD Video and press to perform the selected item in a menu or on-screen display.

24. RETURN BUTTON

Press to return to the previous menu.

25. ZOOM BUTTON

Press to view a part of the scene close-up during playback of a DVD Video.

26. ANGLE BUTTON

Press to select the camera angle during playback of a DVD Video containing multiple camera angles.

27. TIME SEARCH BUTTON

Press to perform the title / chapter / time search during playback.

28. RANDOM PLAY BUTTON

Press to play tracks / songs in random order.

29. PROGRAM BUTTON

Press to program tracks in the desired order.

30. CLEAR BUTTON

Press to clear the programmed tracks one by one.

31. REPEAT MODE BUTTON

Press to play a single chapter / title / track / disc / song / folder repeatedly.

32. REPEAT A< >B BUTTON

Press to play a specific part repeatedly.

33. NTSC/PAL BUTTON

Press to select the right color system corresponding to your country.

34. HEADPHONE JACK

Insert the headphones for private listening.

35. HEADPHONE LEVEL CONTROL KNOB

Rotate to adjust the volume level of the headphones.

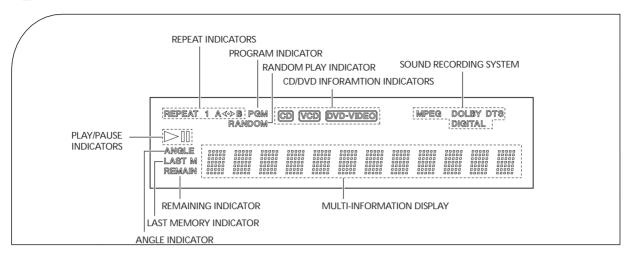
36. FLUORESCENT DISPLAY

For details, see the next page.

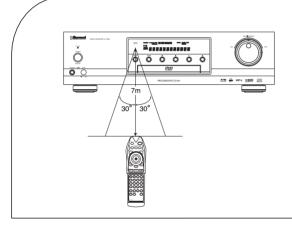
Note:

 On the remote control, the PBC button is not available for this unit.

■FLUORESCENT DISPLAY



REMOTE CONTROL OPERATION



 Use the remote control unit within a range of about 7 meters (23 feet) and angles of up to 30 degrees aiming at the remote sensor.

LOADING BATTERIES

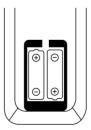


Remove the cover.





Load two size "AAA" batteries matching the polarity.



- Remove the batteries when they are not used for a long time.
- Do not use the rechargeable batteries(Ni-Cd type).

PLAYABLE DISC TYPES

This unit can play only the discs bearing any of the following marks and audio discs such as MP3 CD. CD-R, CD-RW as well.

	DVD VIDEO	CD
Logo mark	VIDEO	DIGITAL AUDIO
Disc size	3" (8 cm) / 5" (12 cm)	3" (8 cm) / 5" (12 cm)
Played sides	One or both	One side only
Contents	Audio + Video	Audio

" is a trademark of DVD Format/Logo Licensing Corporation.

Notes:

- · This unit cannot play discs (such as CD-ROM, DVD-RAM, etc.) other than those listed above. Playing them may generate noise and damage speakers.
- · This unit cannot play CD-Rs and CD-RWs that include unavailable contents or are recorded in nonstandized condition of recording.
- · Depending on the condition of recording, some of MP3 discs may not be played.
- · Depending on the countries, this unit conforms to either the NTSC color system for U.S.A, Canada, etc. or the PAL for Europe, Australia, China, etc.

■Markings on the DVD Videos

Mark	Description
	Indicates the region code where the disc can be played.
4)))	Number of audio languages recorded with multiple audio languages. The number in the mark indicates the number of audio languages. (Up to 8 languages)
2	Number of subtitle languages recorded with the multiple subtitle languages. The number in the mark indicates the number of subtitle languages. (Up to 32 languages)
⊗ 2 N	Number of angles recorded from the multiple camera angles. The number in the mark indicates the number of angles. (Up to 9 angles)
16:9 <u>LB</u>	Aspect ratio and TV screen type. "16:9", "4:3", etc. stands for aspect ratio, "LB" for letter box, "PS" for pan-scan, "WIDE" for wide screen.

NOTES ON DVD VIDEOS

■ Region code

 DVD players and DVD Videos have their own Region Code numbers which are assigned to each country or area as shown below. DVD players are set to your Region Code number at the factory. As a result, if the region code number of this DVD player is different from that of the DVD Video, playback of the DVD Video will not be allowed by the DVD player.

Major countries or area	All regions	North America	Europe, Japan, Middle East	Southeast Asia	Oceania, South America	Russia	China
Playable Region code			2	3	4	5	6

Examples of playable DVD Videos:

In U.S.A











NOTES ON COPYRIGHT

- · Please check the copyright laws in your country to record from DVD Video, CD, MP3 CD, etc. Recording of copyrighted material may infringe copyright laws.
- · DVD Video is protected by the copyguard system.
- · When you connect the unit to your VCR directly, the copyguard system activates and the picture may not be played back correctly.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other right owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

SYMBOL ABOUT INVALID

- When you press a button, if the unit does not accept its operation, papears on the TV screen.
 Operations are occasionally unacceptable even if is not displayed.
- *Invalid operation may occur as expected if:
- The region code number of the unit is different from that of the DVD Video and playback will not be allowed.
- The rating level function works.
 (For details, refer to "SETTING THE CUSTOM SETUP" on page 37.)
- A disc is not playable, etc.

CARE AND HANDLING OF

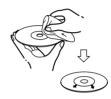
• In handling a disc, hold it carefully with edges.



• Do not stick paper or write anything on the printed surface.



 Fingermarks and dust on the recorded surface should be carefully wiped off with a soft cloth. Wipe straight from the inside to the outside of the disc.



 Always keep the discs in their cases after use to protect them from dust and scratches.



Do not use a cracked, deformed, or repaired disc.
 These discs are easily broken and may cause serious personal injury and apparatus malfunction.

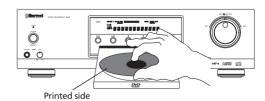






Notes:

- Do not expose discs to direct sunlight, high humidity or high temperature for a long time.
- When loading or unloading a disc in the disc tray, always place it with the printed side up.



BASIC PLAYBACK

■ Preparations

- Turn on the TV and select the video input source connected to the unit.
- When you want to enjoy the sound of disc from the audio system, turn on the audio system and select the input source connected to the unit.
- · Set the TV screen type correctly to match your TV.



Before operation, enter the standby mode.



- The STANDBY indicator lights up. This means that the unit is connected to the AC mains and a small amount of current is retained to support operational readiness
- To turn the power completely off, press the POWER switch again.



In the standby mode, turn the power on.



- Each time the POWER button on the remote control is pressed, the unit is turned on to enter the operating mode or off to enter the standby mode.
- In the standby mode, if the OPEN/CLOSE button on the front panel is pressed, the unit can be also turned on.



Open the disc tray to load a disc with the printed side up, then close it.



or



- 8 cm (3 inch) discs can be loaded on the inside circle of the tray, too.
- When a DVD that doesn't contain any menu is loaded, playback automatically starts.

Note:

 When you play a DVD Video that contains a menu or a MP3 disc, the menu display may appear on the TV screen. In this case, see "To start playback from the menu of DVD Video" or "To start playback from the menu of MP3 disc" on the next page.



In case of CD, press the $PLAY(\triangleright)$ button to start play.

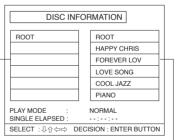




 Example of DVD Video



 Example of MP3 disc

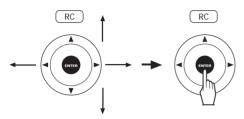


Root men

Folder and song menu

To start playback from the menu of DVD VIdeo

• To select the preferred item, tilt the CURSOR/ENTER button in the desired direction and press the CURSOR/ENTER button (or PLAY(▶) button), or press the NUMERIC buttons.



■In case of use of the NUMERIC buttons on the remote control:

• When selecting "3":

When selecting "10": (10) → (0)
When selecting "21": (10) → (10) → (1)

- · Playback of the selected item starts.
- In case of selecting the item with pressing the NUMERIC buttons, depending on the discs, the PLAY(▶)(or ENTER) button should be pressed to start playback of the item.
- When the selected item contains the subitems, repeat the above step until the preferred item is selected.

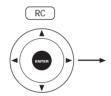
■To stop playback and return to the menu display

- Press the TITLE or MENU button on the remote control. (Which button is pressed differs depending on the discs.)
- · Playback is suspended and the menu display appears.

To start playback from the menu of MP3 disc



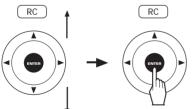
Tilt the CURSOR/ENTER button right to select the folder and song menu.



· Each time the CURSOR/ENTER button is tilted right or left, the folder and song menu or the root menu is selected.



Tilt the CURSOR/ENTER button upward or downward to select the preferred folder or song, then press the CURSOR/ENTER button(or PLAY(►) button.)

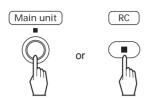


- · When selecting the preferred song, playback starts from the selected song.
- When selecting the preferred folder, the song menu screen of the selected folder is displayed. In this case, repeat the above steps 1 and 2 to select the preferred song in its song menu.

Notes :

- · Depending on the MP3 disc and the condition of recording, some of MP3 discs may not be played or may be played differently.
- The DVD Videos continues to rotate while the menu display appears. When no further selections are to be played, be sure to press the STOP(■) button repeatedly to enter the stop mode and to clear the menu display.
- A TV screen may be burned out if a static picture is displayed for a long time in the stop or the pause mode, etc.. To prevent this, set the SCREEN SAVER to ON (refer to "SETTING THE VIDEO SETUP" on page 32). Then, the unit automatically activates the screen saver function if a static picture, etc. is displayed for over 5 minutes. Pressing any button will cancel the screen saver function and return to the previous display.
- When you press a button, if the corresponding operation is prohibited by the unit or the disc, 🕪 appears on your TV screen.

To stop playback

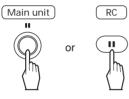


· When playback of DVD Video is stopped, the unit memorizes the point where the STOP(■) button was pressed(RESUME function: DVD Video only). ("LAST M" lights up on the unit's display when this function is activated.)

Press the PLAY(▶) button again, and playback will resume from this point. When the STOP(■) button is pressed again, the RESUME function will be canceled and it enters stop mode. ("LAST M" goes off and "STOP" is displayed.)

- · When 30 minutes elapses in the stop mode, the power is automatically turned off and it enters standby mode.(Auto power-off function)
- Depending on the discs, the unit may resume playback from a point slightly earlier than the point memorized.

To pause playback



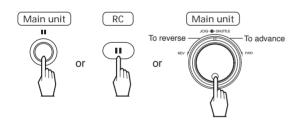
· DVD Video :

The unit will be in the still picture mode.

- · CD/MP3 disc:
- The unit will be in the pause mode.
- To return to normal playback, press the PLAY(►) button.

Frame advance / reverse playback [DVD Video only]

· In the still picture mode,



- Each time the PAUSE(II) button is pressed, the disc is advanced by one frame.
- · Each time the JOG dial is rotated in either direction, the disc is advanced or reversed by one frame.
- To return to normal playback, press the PLAY(►)

To skip ahead or back during playback

· To skip ahead

· To skip back









- · Each time the button is pressed, a chapter on a DVD Video or a track/song on a CD/MP3 disc is skipped.
- · You can select a track/song on a CD/MP3 disc directly with pressing the NUMERIC buttons on the remote control.

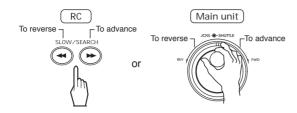
Examples) For "3":

For "10": (-10) $\rightarrow (0)$ For "21": (-10) $\rightarrow (-10)$ $\rightarrow (1)$

· In case of MP3 disc, you can select a song in the current folder only.

Rapid playback during playback

You can play back discs at various speeds.



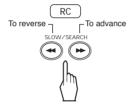
• Each time the button is pressed, the disc is advanced or reversed fast at 4 step speed.

$$\rightarrow$$
 2 X \rightarrow 4 X \rightarrow 6 X \rightarrow 8 X $-$

- Each time the SHUTTLE ring is rotated in either direction and is holded on, the disc is advanced or reversed at 4 step speed, too.
- To return to normal playback, press the PLAY(►) button or release the SHUTTLE ring.
- In case of CD/MP3 disc, normal playback automatically starts at the beginning of the current or next track/song.

Slow playback[DVD Video only]

 In the still picture mode, you can play back the discs at various speeds.



 Each time the button is pressed, the disc is advanced or reversed slowly at 3 step speed.

$$\rightarrow$$
 1/2 X \rightarrow 1/4 X \rightarrow 1/8 X \neg

To return to normal playback, press the PLAY(►) button.

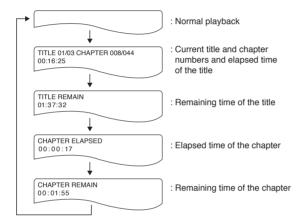
DISPLAYING DISC INFORMATION

- The unit features the on-screen display function showing disc information (title/chapter number, elapsed/remaining time, etc.).
- Press the DISPLAY button.

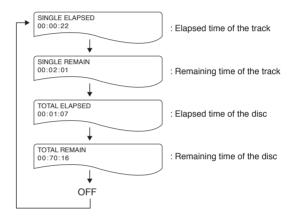


- Then the disc information is displayed on the TV screen.
- Each time this button is pressed, the disc information is changed depending on the discs as follows:

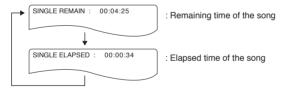
• DVD Video :



• CD :



• MP3 disc :

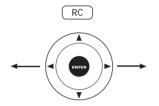


• Depending on the disc and some operation status as playback of DVD Video using a title or DVD menu, etc., the disc information may not be displayed.

PLAYING THE DESIRED SECTION OF DISC (TITLE/CHAPTER/TIME

During playback, press the TIME SEARCH button. · CD DVD Video GO TO ..:.. TITLE 01/07 CHAPTER 001/012 : Title/chapter search mode Time search mode or Total chapter number ent chapter number Total title numb TITLE 01/07 TIME _ _ : _ : _ : : Time search mode

- Then the search mode is displayed on the TV screen for several seconds. When the search mode disappears, press the TIME SEARCH button again.
- In case of DVD Video, each time this button is pressed, the title/chapter search mode or the time search mode is selected.
- ■When selecting the title search mode or the chapter search mode while displaying the title/chapter search mode, tilt the CURSOR/ENTER button left or right to select the preferred search mode.



· The selected mode is highlighted.



Select the section to be played with pressing the NUMERIC buttons on the remote control.

■ When entering the title or chapter number

Examples) For "3": 3 For "11": $(+10) \rightarrow (1)$

■ When entering the elapsed time

You can play a disc from the desired point by specifying the elapsed time from the beginning of the current title(for DVD Video) or the disc(for CD).

Examples) For "3 min. 15 sec.":



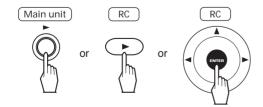
For "2 hou. 59 min. 35 sec."

 $(0) \rightarrow (2) \rightarrow (5) \rightarrow (9)$

(): DVD Video only



In case of DVD Video, start playback from the selected section.



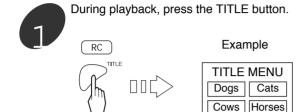
Notes:

- In case of CD, if the elapsed time is entered, play automatically starts without pressing the PLAY(►) or CURSOR/ENTER button.
- · If the title/chapter/time you entered is not contained on the disc, search playback will not work.
- · Depending on the disc, a search playback will not work or may work differently.

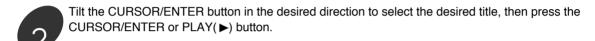
PLAYING A SPECIFIC ITEM [DVD

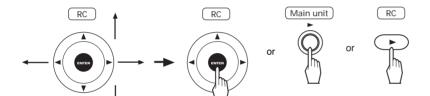
When using a title menu

• If some DVD Videos which contain more than one title may have the menu like as a list of the titles, the TITLE button can be used to select the desired title. (The details of operation differ depending on the disc used.)



- Then a list of titles on the disc is displayed on TV screen.
- If the disc does not have the menu such as a list of titles, this function does not work.





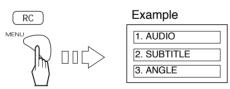
- The unit starts playback of the selected title.
- When the menu continues onto another screen, repeat this step until the desired title is selected.

When using a DVD menu

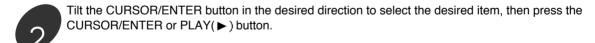
 Some DVD Videos have unique menu structures called DVD menus. For example, the discs programmed with complex contents provide guide menus, and those recorded with various languages provide menus for audio and subtitle language. Although the DVD menu's contents and operation differ from disc to disc, the following explains basic operation when this feature is used.

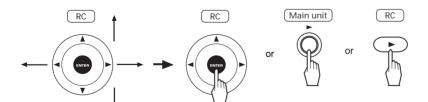


During playback, press the MENU button.



- Then the DVD menu available on the disc is displayed on TV screen.
- If the disc does not have the DVD menu, this function does not work.





- The unit starts playback of the selected item.
- When the menu continues onto another screen, repeat this step until the desired item is selected.

REPEAT PLAYBACK

• You can play a current title, chapter, folder, track, song, disc or part repeatedly.(Title repeat, chapter repeat, folder repeat, track repeat, song repeat, disc repeat, repeat A <> B)

Note:

• The repeat playback may not work correctly on some DVD Videos and MP3 discs.

Repeating a disc, title, chapter, folder, track or song

• During playback of the desired title, chapter, folder, track or song, press the REPEAT MODE button.



 Then the selected repeat mode is displayed on the TV screen.

• Each time this button is pressed, the repeat mode changes depending on the disc as follows:



• To return to normal playback, press the REPEAT MODE button repeatedly until the "REPEAT OFF" or "NORMAL" is displayed depending on the disc.

Repeating the desired part [DVD Video/CD only]



During playback at the beginning of the part you want to repeat, press the REPEAT A <> B button.



 Then "A TO B SET A" is displayed on the TV screen.



At the end of the part, press the REPEAT A <> B button again.

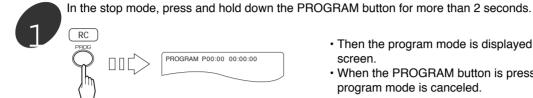
- Then "A TO B SET B" is displayed on the TV screen, and the part between points A and B is played back repeatedly.
- To return to normal playback, press the REPEAT A <> B button repeatedly until "A TO B CANCELLED" is displayed.

Notes:

- You may not use the repeat A <> B playback of the part that includes multiple camera angles.
- Repeat A< >B playback works only within a title or a track.

PLAYING TRACKS IN DESIRED

• Up to 25 tracks can be programmed to be played in any desired order.



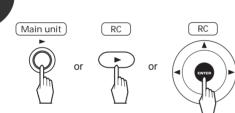
- Then the program mode is displayed on the TV
- · When the PROGRAM button is pressed again, the program mode is canceled.
- Select the desired track with pressing the NUMERIC buttons on the remote control. Example) When the track 5 and 12 are programmed. PROGRAM P01:05 00:03:34



• The playing time of over 99 minutes 59 seconds cannot be displayed.

Repeat the above step 2 until the desired tracks are programmed.

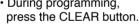
To start program play, press the PLAY(▶) button or the CURSOR/ENTER button.



- · Play will start in the programmed order.
- · After all programmed tracks have been played, it enters the stop mode without clearing the programmed tracks.(Program play is suspended)

■Clearing the programmed tracks ■To clear one by one

During programming,





- · Each time this button is pressed, the programmed tracks are cleared one by one in the opposite order.
- · Once program play is performed, you cannot clear one by one.

■To clear all programmed tracks

· During programming, press the PROGRAM button and when the STOP(■) button is pressed to stop program play, press and hold down the PROGRAM button for more than 2 seconds.



- Then the programmed tracks are all cleared.
- · Opening the disc tray clears all programmed tracks.

■Checking the programmed tracks

 When the STOP(■) button is pressed to stop program play, press the PROGRAM button.



· Each time this button is pressed, the programmed tracks are displayed one by one.

PLAYING TRACKS IN RANDOM

- The unit plays the tracks in the disc(for CD) or the songs in the current folder(for MP3 disc) in random order.
- When one of the stand-alone songs in MP3 disc(, not in a folder) is selected, the unit plays only these standalone songs in random order.



In the stop mode, press the RANDOM PLAY button.

In case of MP3 disc, select a song in the desired folder with tilting CURSOR/ENTER button and then press the RANDOM PLAY button.



• Then "RANDOM ON" or "RANDOM" is displayed on the TV screen depending on the disc.

• CD

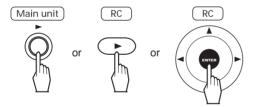
RANDOM ON

• MP3 disc





To start random play, press the PLAY(\blacktriangleright) button or the CURSOR/ENTER button.



- · Play will start in random order.
- To cancel the random play, press the RANDOM PLAY button in the stop mode. Then "RANDOM OFF" or "NORMAL" is displayed depending on the disc.

Note:

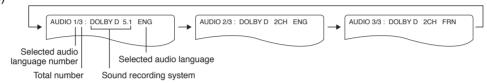
· Random play may not work depending on the disc.

CHANGING THE AUDIO LANGUAGE [DVD

- It is possible to change the audio language to a different language from the one selected at the initial settings. (For details, refer to "SETTING THE LANGUAGE SETUP" on page 30.)
 This operation works only with DVD Videos on which multiple audio languages are recorded.
- During playback, press the AUDIO button.



- Then the audio language menu is displayed on the TV screen for several seconds.
- Each time this button is pressed, the audio language changes as follows: Example)



- · You cannot select the preferred audio language when the disc contains only one.
- When the power is turned on or the disc is changed, etc., the language heard is the one selected at the initial settings. If this is not recorded on the disc, only the available language on the disc will be heard.
- · On some discs, an audio language except the selected one at the initial settings may be heard.

CHANGING THE SUBTITLE LANGUAGE

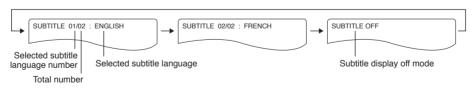
- It is possible to change the subtitle language to a different language from the selected one at the initial settings. (For details, refer to "SETTING THE LANGUAGE SETUP" on page 30.)

 This operation works only with discs on which multiple subtitle languages are recorded.
- During playback, press the SUBTITLE button



- Then the subtitle language menu is displayed on the TV screen for several seconds.
- \bullet Each time this button is pressed, the subtitle language changes as follows:

Example)



Notes:

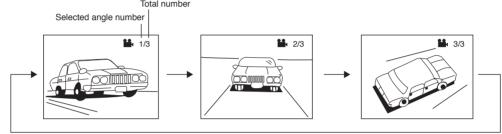
- You cannot select the preferred subtitle language when the disc does not contain the available language.
- When the power is turned on or the disc is changed, etc., the displayed language is the selected one at the initial settings. If this is not recorded on the disc, the available language on the disc may be displayed.
- On some discs, a subtitle language except the selected one at the initial settings may be displayed.
- When a disc supporting the closed caption is played, the subtitle and the closed caption may overlap each other on the TV screen. In this case, turn off the display of subtitle language.
- · When this unit does not know the selected language name, UNKNOWN may be displayed instead of its name.

CHANGING THE CAMERA ANGLE [DVD

- Some DVD Videos contain scenes which have been shot simultaneously from multiple camera angles. For these discs, the same scene can be viewed from each of these different angles.
- The recorded angles differ depending on the disc used.
- During playback at the scene recorded from multiple camera angles, press the ANGLE button.



- During playback at the scene recorded from multiple camera angles, the "ANGLE" is displayed on the unit's display.
- Then the angle symbol is displayed on the TV screen for several seconds.
- Each time this button is pressed, the angle changes as follows:
 Example)



Note:

• This function works only at scenes recorded from multiple angles.

PLAYING A SCENE CLOSE-UP [DVD

• It is possible to zoom in a part of the scene. You can select and view any part of the scene close-up.



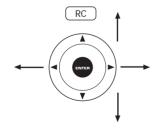
During playback or in the still pause mode, press the ZOOM button.



- The unit zooms in to the center part of the scene.
- Each time this button is pressed, zoom scale changes as follows:



Tilt the CURSOR/ENTER button in the desired direction to select the desired part of the scene.



Note:

- Depending on some operation status such as playback of DVD Video by using a title or DVD menu, etc., the zoom playback does not work.
- To return to the previous operation status, press the ZOOM button repeatedly until the zoom playback is canceled.

CHANGING THE VIDEO SIGNAL

• Depending on the countries, this unit conforms to either the NTSC color system for U.S.A, Canada, etc., or the PAL for Europe, Australia, China, etc.

If the color system of this unit is different from that of your TV monitor and the discs to be played, the screen may be somewhat hard to see or the picture quality may be poor.

Only in this case, change the video signal format to another.

(For details about the video signal format of your TV monitor or the discs, refer to the operating instruction of your TV or the disc's jacket.)

- You can set the video signal format to the desired at initial settings, too.
 (For details, refer to "SETTING THE VIDEO SETUP" on page 32.)
- In the stop mode, press the NTSC/PAL button.



 Each time this button is pressed, the video signal format changes as follows:

$$\rightarrow$$
 AUTO \rightarrow NTSC \rightarrow PAL $-$

The AUTO is compatible with both NTSC and PAL formats.

CHANGING THE COMPONENT VIDEO

- When the COMPONENT VIDEO OUTs of this unit are connected to the COMPONENT VIDEO INs of TV or projector, etc., depending on whether the video signal system of your TV or projector, etc. supports the conventional interlacing(simply called interlaced) video signals or the progressively scanned(simply called progressive) video signals(that can reproduce high-density pictures with less flicker), you should select the corresponding video signal.
- You can set the component video output signal to the desired at initial settings, too.
 (For details, refer to "SETTING THE VIDEO SETUP" on page 32.)

Notes:

- When you select the progressive video signal, the S-VIDEO and COMPOSITE VIDEO OUTs of this unit cannot output the normal video signals. Therefore, it causes the picture to break up and shake.
- When the progressive video signals are input into the non-progressive COMPONENT VIDEO INs of your TV, etc., the picture may not be shown normally, too.
 Therefore, when the progressive COMPONENT VIDEO INs of TV is not connected to, you should select the

Inerefore, when the progressive COMPONENT VIDEO INS of TV is not connected to, you should select the interlaced video signal.

• Press the PROGRESSIVE SCAN button.



 Each time this button is pressed, the component video output signal changes and "INTERLACED TV" or "PROGRESSIVE TV" is displayed on the TV screen.

LISTENING WITH HEADPHONES



For private listening, connect the headphones.



• The headphones with a 1/4 inch(6.3 mm) stereo plug can be connected.



Adjust the volume level of the headphones as desired.



Note:

• Listening at extremely high levels may be harmful to your ears and headphones.

The initial settings of the unit at the factory can be modified as desired later.

Even after the power of the unit is switched to the standby mode, the initial settings are stored in memory until it is changed the next time.



In the stop mode, press the SETUP button to enter the setup mode.



- The setup menu screen appears on the TV screen.
- To exit the setup mode, press the SETUP button, or tilt the CURSOR/ENTER button upward or downward to select "EXIT SETUP" on the main setup menu and press the CURSOR/ENTER button.

Main setup menu



 On the menu screen, " ⊕ ⊕ ⇔" stands for the CURSOR(/ENTER) button, "ENTER" for (CURSOR/)ENTER.



Tilt the CURSOR/ENTER button upward or downward to select a setting category.



• Then the selected category or item is highlighted.



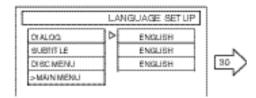
Press the CURSOR/ENTER button to confirm your selection.



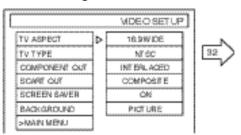
• The selected category will provide you the setting details using the succeeding screen.

Continued

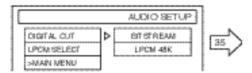
■ When selecting the LANGUAGE SETUP



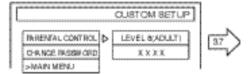
■When selecting the VIDEO SETUP



■ When selecting the AUDIO SETUP



■When selecting the CUSTOM SETUP



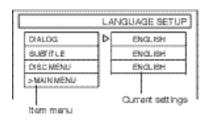
■When selecting the OTHERS



Note:

• During setting operation, only the POWER button and the buttons required for setting will function.

SETTING THE LANGUAGE SETUP



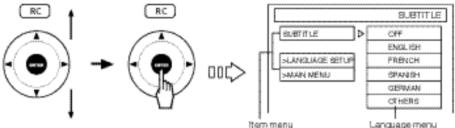
- BIALOG: When selecting a preferred dialog language to be heard from those included on the DVD Video.
- SUBTITLE: When selecting a preferred subtitle language to be displayed from those imbuded on the DVO Video.
- DISC MENU: When selecting a preferred menu language to be displayed from those included on the DVD Video.

Note:

• If the selected language is not recorded in the DVD Video, one of the recorded languages is automatically selected.

Tilt the CURSOR/ENTER button upward or downward to select the item, then press the CURSOR/ENTER button.

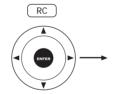
Example) When selecting the SUBTITLE



· Then the selected item screen is displayed.

2

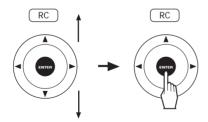
Tilt the CURSOR/ENTER button right to select the language menu.



• Each time the CURSOR/ENTER button is tilted right or left, the language menu or the item menu is selected.



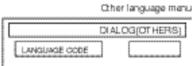
Tilt the CURSOR/ENTER button upward or downward to select the preferred language, then press the CURSOR/ENTER button.



- The selected language is colored.
- You can select one of ENGLISH, FRENCH, SPANISH, and GERMAN.
- When you want to select a language other than languages listed in the language menu, select "OTHERS".
- To turn off the display of subtitle language, select "OFF" on the subtitle language menu.

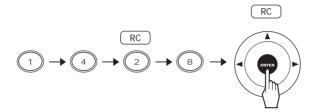
■When selecting "OTHERS"

Example) When selecting "OTHERS" in the dialog language menu.



• Then 4-digit language code input screen is displayed.

 Refer to the "DVD Language Code List" on page 44 to find the 4-digit language code for the preferred language and input it with pressing the NUMERIC buttons, then press the CURSOR/ENTER button. Example) When inputting "1428"



- When the 4-digit code is input correctly, the previous menu screen is displayed.
- If you input a wrong code, "WRONG LANGUAGE CODE~" is displayed. In this case, input the code again.
- While displaying the other language menu screen, when the RETURN button is pressed, the previous menu screen will be displayed.

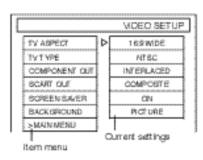
■To return to the previous menu screen

- Tilt the CURSOR/ENTER button left to select the item menu, tilt the CURSOR/ENTER button upward or downward to select "LANGUAGE SETUP" and press the CURSOR/ENTER button.
- Then the LANGUAGE SETUP menu screen will be displayed.
- · When the RETURN button is pressed, the previous menu screen can be displayed, too.
- Repeat the above steps 1~3 until other language setups are set to your preference.

■To return to the main setup menu screen

- Tilt the CURSOR/ENTER button left to select the item menu, tilt the CURSOR/ENTER button upward or downward to select "MAIN MENU" and press the CURSOR/ENTER button.
- Then the main setup menu screen will be displayed.
- · When the RETURN button is pressed repeatedly, the main setup menu screen can be displayed, too.

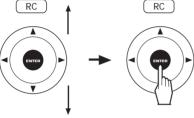
SETTING THE VIDEO SETUP



- T VASPECT: When selecting a picture size according to the aspect ratio of your TV's screen.
- TVTYPE: When selecting the classed video signal format to match that of your TV monitor and DVD Video to be played.
- DOMPONENT OUT: When selecting the conventional interlacing video signals or progressively scanned video signals to be output from the unit's COMPONENT VIDEO OUTs.
- SCART OUT: When selecting the OCMPOSITE (regular) video signal or the 8-MDEO signals to be output from the unit's AVV SCART connectors. (Regional Option for Europe, do. only)
- . BCREEN SAVER: Whenturning on or of the screen saverfunction.
- BACKGROUND: When selecting the picture background with Sherwood logo or blue background.



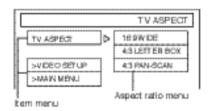
Tilt the CURSOR/ENTER button upward or downward to select the preferred item, then press the CURSOR/ENTER button.



· Then the selected item screen is displayed.

■ When selecting the TV ASPECT

• When you connect a normal TV with 4:3 aspect ratio to the unit, select either "4:3 LETTER BOX" or "4:3 PAN-SCAN" and when you connect a wide TV with 16:9 aspect ratio, select "16:9 WIDE".



- 16:9 WIDE: DVD Videos recorded with the 16:9 screen are reproduced by filling the TV screen.
- 4:3 LETTER BOX: DVD Videos recorded with the 16.9 aspect ratio are reproduced in the letter box screen which has black bands on the top and bottom.
- 4:3 PAN-SCAN: DVO Videos recorded with the 19:9 aspect ratio and the pan-scan specification
 are reproduced in the pan-scan screen which automatically trims the left and
 right of picture.

the TV aspect setting you select.

■ When selecting the TV TYPE

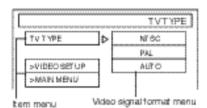
• Depending on the countries, this unit conforms to either the NTSC color system for U.S.A, Canada, etc., or the PAL for Europe, Australia, China, etc.

If the color system of this unit is different from that of your TV monitor and the discs to be played, the screen may be somewhat hard to see or the picture quality may be poor.

Only in this case, change the video signal format to another.

(For details about the video signal format of your TV monitor or the discs, refer to the operating instruction of your TV or disc's jacket.)

You can select the desired video signal format with pressing the NTSC/PAL button, too.
 (For details, refer to "CHANGING THE VIDEO SIGNAL FORMAT" on page 26.)



- NTSC: When selecting the NTSC format.
- PAL: When selecting the PAL formet.
- . AUTO: When selecting the AUTO that is compatible with both NTSC and PAL formats.

Continued

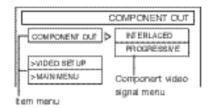
■When selecting the COMPONENT OUT

When the COMPONENT VIDEO OUTs of this unit are connected to the COMPONENT VIDEO INs of TV or
projector, etc., depending on whether the video signal system of your TV or projector, etc. supports the
conventional interlacing(simply called interlaced) video signals or the progressively scanned(simply called
progressive) video signals, you should set the COMPONENT OUT to the corresponding setting.

Notes:

- When the COMPONENT OUT is set to PROGRESSIVE, the S-VIDEO and COMPOSITE VIDEO OUTs cannot output the normal video signals. Therefore, it causes the picture to break up and shake.
- When the progressive video signals are input into the non-progressive COMPONENT VIDEO INs of your TV, etc., the picture may not be shown normally, too.

Therefore, when the progressive COMPONENT VIDEO INs of TV is not connected to, you should set the COMPONENT OUT to INTERLACED.



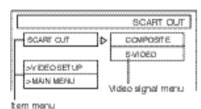
- INTERLACED: Select this when connecting to TV without the progressive COMPONENT VIDEO INs.
- PROGRESSIVE: Select this when connecting to TV with the progressive OOMPONENT VIDEO INs.

■When selecting the SCART OUT(Regional Option)

- For some countries like Europe, this unit incorporates the TV and VCR SCART connectors which can deliver either the COMPOSITE(regular) video or the S-VIDEO(Y and C) signals as well as the audio L and R signals for easy connection.
- When the SCART connections between the unit and video components are made, depending on whether you
 use the COMPOSITE(regular) video signal from the SCART connector or the S-VIDEO signals, you can select
 either the COMPOSITE(regular) video or the S-VIDEO.

Note:

 Be sure to set your TV and VCR to the corresponding one of the COMPOSITE (regular) video and S-VIDEO modes to match the SCART OUT setting of the unit. (Refer to the operating instructions of the component(s) connected.)



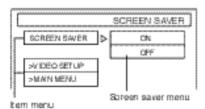
- COMPOSITE: When using the COMPOSITE (regular) video signal from the TV and VCR SCART connectors of the unit.
- S-MDEO : When using the S-MDEO signals.

■When selecting the SCREEN SAVER

• A TV screen may be burned out if a static picture is displayed for a long time in the stop mode or the pause mode, etc.. To prevent this, set the SCREEN SAVER to ON. Then the unit automatically activates the screen saver function if a static picture is displayed for over 5 minutes.

Note

• The monitor screen of a projector or projection TV is easily burned out if a static picture is displayed for a long time. Be careful not to allow the monitor screen to be burned out when the SCREEN SAVER is set to OFF.

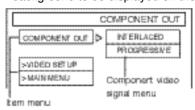


- ON: Whenturning on the screen sever function.
- OFF: When turning it off

Continued

■When selecting the BACKGROUND

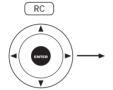
 When there is no playback picture, you can select the picture background with Sherwood logo or blue background to be displayed on the TV screen.



- INTERLACED: Select this when connecting to TV without the progressive COMPONENT MDECTING
- PROGRESSIVE: Select this when connecting to TV with the progressive OOMPONENT VIDEO INs.



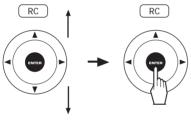
Tilt the CURSOR/ENTER button right to select the setting menu.



• Each time the CURSOR/ENTER button is tilted right or left, the setting menu or the item menu is selected.



Tilt the CURSOR/ENTER button upward or downward to select the preferred setting, then press the CURSOR/ENTER button.



· The selected setting is colored.

■To return to the previous menu screen

- Tilt the CURSOR/ENTER button left to select the item menu, tilt the CURSOR/ENTER button upward or downward to select "VIDEO SETUP" and press the CURSOR/ENTER button.
 Then the VIDEO SETUP menu screen will be displayed.
- When the RETURN button is pressed, the previous menu screen can be displayed, too.
- Repeat the above steps 1~3 until other video setups are set to your preference.

■To return to the main setup menu screen

- Tilt the CURSOR/ENTER button left to select the item menu, tilt the CURSOR/ENTER button upward or downward to select "MAIN MENU" and press the CURSOR/ENTER button.

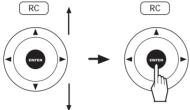
 Then the main setup menu screen will be displayed.
- When the RETURN button is pressed repeatedly, the main setup menu screen can be displayed, too.

SETTING THE AUDIO SETUP

• When the DIGITAL OUTs of the unit are connected to the corresponding DIGITAL INs of an amplifier with builtin decoder, MD/CD recorder, etc., these items should be set correctly.



Tilt the CURSOR/ENTER button upward or downward to select the preferred item, then press the CURSOR/ENTER button.



• Then the selected item screen is displayed.

■When selecting the DIGITAL OUT

Notes:

- When the DIGITAL OUT of the unit is connected to the DIGITAL IN of an amplifier which does not contain the Dolby Digital or MPEG-II decoder(which processes the bitstream signal), you should set the DIGITAL OUT to LPCM to convert Dolby Digital or MPEG bitstream to linear PCM(2 channel) of 48 kHz/16 bit and to output it.
- If the DIGITAL OUT is not set correctly, loud noise or no sound may be heard from the speakers, and it may be harmful to your ears and damage the speakers.



■When selecting the LPCM SELECT

This setting is valid when the DIGITAL OUT is set to BITSTREAM or LPCM.

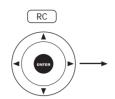
Notes:

- When connecting to the DIGITAL IN of an MD or CD recorder for digital recording, you should set the LPCM SELECT to LPCM 48K. If not, the digital recording does not perform properly.(Digital output of PCM audio is restricted to 48 kHz/16 bit or below for copyright protection.)
- Because the audio recording format of the MD or CD recorder is the linear PCM, the digital recording of the Dolby Digital, DTS and MPEG bitstream signal cannot be performed.
- When connecting to the DIGITAL IN of an amplifier which does not process high frequency signals of 96 kHz, you should set the LPCM SELECT to LPCM 48K. If not, no sound may be heard from the speakers.

Continued



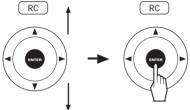
Tilt the CURSOR/ENTER button right to select the setting menu.



• Each time the CURSOR/ENTER button is tilted right or left, the setting menu or the item menu is selected.



Tilt the CURSOR/ENTER button upward or downward to select the preferred setting, then press the CURSOR/ENTER button.



• The selected setting is colored.

■To return to the previous menu screen

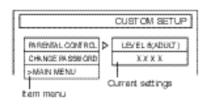
- Tilt the CURSOR/ENTER button left to select the item menu, tilt the CURSOR/ENTER button upward or downward to select "AUDIO SETUP" and press the CURSOR/ENTER button.

 Then the AUDIO SETUP menu screen will be displayed.
- When the RETURN button is pressed, the previous menu screen can be displayed, too.
- Repeat the above steps 1~3 until other audio setups are set to your preference.

■To return to the main setup menu screen

- Tilt the CURSOR/ENTER button left to select the item menu, tilt the CURSOR/ENTER button upward or downward to select "MAIN MENU" and press the CURSOR/ENTER button.
 Then the main setup menu screen will be displayed.
- When the RETURN button is pressed repeatedly, the main setup menu screen can be displayed, too.

SETTING THE CUSTOM SETUP



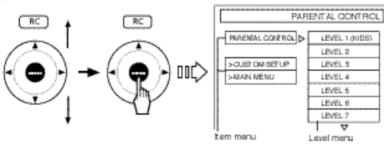
- PARENT AL CONTROL: When restricting playback of DVO Videowhibh contains violent and
 - other scenes according to the level set by the user. For example, if a movie which includes violent scenes supports the parental look feature, such scenes which you do not want to let children view can out or replaced with other scenes.
- CHANGE PASSWORD: When changing the password

The unit's password has been set to "9829" at the factory

When selecting the PARENTAL CONTROL



Tilt the CURSOR/ENTER button upward or downward to select the PARENTAL CONTROL, then press the CURSOR/ENTER button.



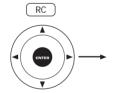
- LEVEL 1(NUB);
 Belet this to play only DVD Videos for children.
 Adult and general audience DVD Videos cannot be played.
- LEVEL 2-7: Beleft this to play DVD Videos for general audiences and children. Adult DVD Videoscannot be played.
- LEVEL 8(ADULT): Select this to play for general audiences, children and adults.
- NO PARENTAL:
 Beleat this to play all DVD Videos.

Notes:

- When you set the rating level low, some discs may not be played at all. In this case, set the rating level higher or to "NO PARENTAL".
- DVD Videos may or may not respond to the rating level setting. Make sure this function works with your DVD Videos.



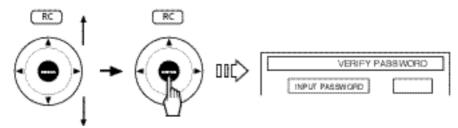
Tilt the CURSOR/ENTER button right to select the level menu.



• Each time the CURSOR/ENTER button is tilted right or left, the level menu or the item menu is selected.



Tilt the CURSOR/ENTER button upward or downward to select the preferred level, then press the CURSOR/ENTER button.



· The verify password screen is displayed.

Continued



Input a 4-digit password with pressing the NUMERIC buttons, then press the CURSOR/ENTER button.



- When the password is input correctly, the rating level is set to the preferred level and the previous menu screen is displayed.
- If you input a wrong password, "PASSWORD INCORRECT" is displayed. In this case, input the password again
- When you input a wrong password 3 times, the setup mode is canceled and the unit enters the stop mode.
- While displaying the verify password menu screen, when the RETURN button is pressed, the previous menu screen will be displayed.

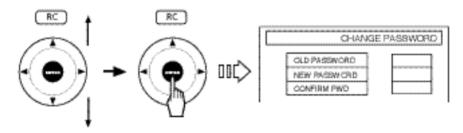
Note:

• If you forgot your password, input "0629" that has been set to at factory.

When selecting the CHANGE PASSWORD



Tilt the CURSOR/ENTER button upward or downward to select the CHANGE PASSWORD, then press the CURSOR/ENTER button.





Input 4-digit passwords in sequence for old password, new password and confirmation, then press the CURSOR/ENTER button.



- When each password is input correctly, the previous menu screen is displayed.
- While displaying the change password menu screen, when the RETURN button is pressed, the previous menu screen will be displayed.

Note:

• Do not forget the password.

If you forgot your password, input "0629" that has been set to at factory.

Continued

■To return to the previous menu screen on the PARENTAL CONTROL menu screen

- Tilt the CURSOR/ENTER button left to select the item menu, tilt the CURSOR/ENTER button upward or downward to select "CUSTOM SETUP" and press the CURSOR/ENTER button.

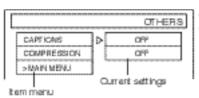
 Then the CUSTOM SETUP menu screen will be displayed.
- When the RETURN button is pressed, the previous menu screen can be displayed, too.
- Do the steps 1 and 2 in "when selecting the CHANGE PASSWORD" procedure to change the password.

■To return to the main setup menu screen

- Tilt the CURSOR/ENTER button left to select the item menu, tilt the CURSOR/ENTER button upward or downward to select "MAIN MENU" and press the CURSOR/ENTER button.

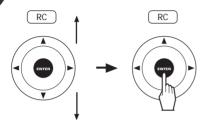
 Then the main setup menu screen will be displayed.
- When the RETURN button is pressed repeatedly, the main setup menu screen can be displayed, too.

SETTING THE OTHERS



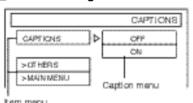
- CAPTICNS: When turning on or off the display of the closed captions recorded on DVD Videos.
- COMPRESSION: When turning on or of the dynamic range compression that makes taint sounds easier to hear at low volume levels.

Tilt the CURSOR/ENTER button upward or downward to select the preferred item, then press the CURSOR/ENTER button.



• Then the selected item screen is displayed.

■When selecting the CAPTIONS



- OFF: When turning off the display of the closed partions recorded on DVD Videos.
- . ON: When turning it on.

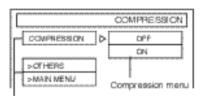
Notes:

- The caption decoder is required to display captions.

The captions dannot be displayed when playing DVD Videos which do not cortain caption signals.

■When selecting the COMPRESSION

• This function can be activated, while playing the Dolby Digital program sources only.

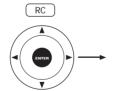


- . OFF: Whenturning of the dynamic range compression.
- CN: Whenturning it onto hear fairt sound easier at low volume levels.
- In some Bolby Bigital softwares, this function cannot be available.

tem menu

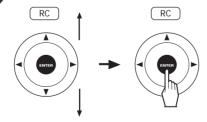
2

Tilt the CURSOR/ENTER button right to select the setting menu.



 Each time the CURSOR/ENTER button is tilted right or left, the setting menu or the item menu is selected.

Tilt the CURSOR/ENTER button upward or downward to select the preferred setting, then press the CURSOR/ENTER button.



The selected setting is colored.

Continued

■To return to the previous menu screen

- Tilt the CURSOR/ENTER button left to select the item menu, tilt the CURSOR/ENTER button upward or downward to select "OTHERS" and press the CURSOR/ENTER button.
 Then the OTHERS menu screen will be displayed.
- When the RETURN button is pressed, the previous menu screen can be displayed, too.
- Repeat the above steps 1~3 until other setups are set to your preference.

■To return to the main setup menu screen

- Tilt the CURSOR/ENTER button left to select the item menu, tilt the CURSOR/ENTER button upward or downward to select "MAIN MENU" and press the CURSOR/ENTER button.

 Then the main setup menu screen will be displayed.
- When the RETURN button is pressed repeatedly, the main setup menu screen can be displayed, too.

DVD Video

This refers to a high-density optical disc on which high-quality pictures and sound have been recorded by means of digital signals. Incorporating a new video compression technology (MPEG II) and high-density recording technology. DVD Video enables esthetically pleasing full-motion video to be recorded over long periods of time (for instance, a whole movie can be recorded).

DVD Video has a structure consisting of two 0.6 mm thin discs which are adhered to each other. Since the thinner the disc, the higher the density at which the information can be recorded, a DVD Video has a greater capacity than a single 1.2 mm thick disc. Since the two thin discs are adhered to each other, there is the potential to achieve double-sided play sometime in the future for even longer duration play.

Title, Title number (DVD Video)

The title is the largest unit of the video/audio recording in DVD Videos. Usually, the title corresponds to a movie of video software or an album (or a piece) of music software. Title numbers are sequential numbers assigned to titles.

Chapter, Chapter number (DVD Video)

Chapters are divisions, which are smaller than the titles, of the contents recorded on DVD Videos. Every title is composed of more than one chapter. Chapter numbers are the sequential numbers assigned to the chapters in a DVD Video.

Folder (MP3 disc)

The folder is the largest unit of the contents recorded on MP3 discs. Usually, the folder corresponds to an album(or a piece) of music software.

Track / song number (CD, MP3 disc)

Track / song numbers are used to designate the various sections of a disc.

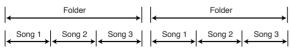
DVD Video structure



CD structure

$$\left| \underbrace{\mathsf{Track} \ 1}_{} \right| \underbrace{\mathsf{Track} \ 2}_{} \left| \underbrace{\mathsf{Track} \ 3}_{} \right| \underbrace{\mathsf{Track} \ 4}_{} \right|$$

· MP3 disc structure



Aspect ratio (DVD Video)

The aspect ratio is the ratio between the vertical and horizontal size of the picture displayed on a TV screen. The aspect ratio of normal TV screen is 4:3 while that of the wide-screen TV and HDTV screen is 16:9.

Subtitle (DVD Video)

Some DVD Videos contain the recording of more than one subtitle languages. With these discs, this unit can select one of the subtitle languages as desired during playback.

Angle (DVD Video)

Some DVD Videos contains scenes which have shot simultaneously from multiple camera angles. With these discs, the same scene can be viewed from each of these different angles.

Dolby Digital

Dolby Digital provides multichannel surround sound in cinemas from 35 mm film and in the home from laser discs, DVDs, and digital broadcast television, cable, and satellite systems. It enables the transmission and storage of up to five full-range audio channels, plus a low-frequency effects channel(LFE), thus 5.1 channels, in less space than is required for just one linear PCM-coded channel on a compact disc.

Dolby Pro Logic

Dolby Pro Logic decodes program material encoded in Dolby Surround, and is built into virtually every home theater audio system. Dolby Pro Logic reconstructs the original four channels - left, center, right, and surround - that were encoded onto the program material's stereo soundtracks.

Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic", and the double-D symbol are trademarks of Dolby Laboratories.

DTS (Digital Theater Systems)

DTS is a newly-developed surround system which can handle more amount of data than Dolby Digital, providing better audio quality. Though the number of audio channels is 5.1 which is same as Dolby Digital, discs bearing the "Provides fat sound and better signal-to-noise ratio, thanks to the lower audio compression ratio format. It also provides wide dynamic range and better separation, resulting in magnificent sound.

"DTS" is a registered trademark of Digital Theater Systems, Inc.

If a fault occurs, run through the table below before taking your unit for repair.

If the fault persists, attempt to solve it by switching the unit off and on again. If this fails to resolve the situation, consult your dealer. Under no circumstances should you repair the unit yourself as this will invalidate the guarantee!

PROBLEM	POSSIBLE CAUSE	REMEDY		
No power	The AC input cord is disconnected. Poor connection at AC wall outlet or the outlet is inactive.	Connect cord securely. Check the outlet using a lamp or another appliance.		
The disc is loaded upside down. The disc is not playable. The disc is dirty. The rating level is not set correctly. The symbol about invalid operation is displayed.		Reload the disc with the printed side up. Use a playable disc. Clean the disc. Set the rating level setting correctly. (Refer to "SETTING THE CUSTOM SETUP" on page 37.) Adjust the setting correctly. (Refer to "SYMBOL ABOUT INVALID OPERATION on page 13.)		
Malfunction	The disc is scratched or dirty badly.	Press the POWER switch to switch the power off, press the POWER switch again and then unload the disc.		
No picture	The video cords are disconnected. The incorrect selection of input source on the TV. The disc is not playable.	Connect the cords correctly. Select the input source correctly. Use a playable disc.		
Noisy or distorted picture	The unit is connected to a VCR directly and the copyguard function is activated. The disc is dirty. It is in rapid advance or reverse playback, or in frame advance or reverse playback.	Connect the unit so that the picture signal is transferred directly to the TV. Clean the disc. Sometimes a small amount of picture distortion may appear. This is not malfunction.		
Abnormal picture	The COMPONENT OUT is not set correctly or the component video output signal is not selected correctly.	Set the COMPONENT OUT setting correctly or select the component video output signal correctly. (Refer to "SETTING THE VIDEO SETUP" on page 32 or "CHANGING THE COMPONENT VIDEO OUTPUT SIGNAL" on page 26.)		
Slight pause of picture	The layer transition occurs during playback of DVD Videos recoded in dual-layer format.	Sometimes slight pause may occur. This is not malfunction.		
No sound	The audio cords are disconnected. The speakers are disconnected to the amplifier. The incorrect selection of input source on the amplifier. The audio setup is not adjusted correctly.	Connect the cords correctly. Connect the speakers correctly. Select the input source correctly. Adjust the audio setup correctly. (Refer to "SETTING THE AUDIO SETUP" on page 35.)		
Noisy or distorted sound	The disc is dirty. Poor connections.	Clean the disc. Check the connections and connect all cords securely.		
Remote control unit does not operate.	Batteries are not loaded or exhausted. The remote sensor is obstructed.	Replace the batteries. Remove the obstacle.		

Specifications

- D/A conversion	■TYPE	
■D/A CONVERSION SECTION D/A conversion Oversampling Sampling frequency: 44.1, 48 kHz / 96 kHz ■AUDIO SECTION Frequency response Sampling frequency: 44.1 kHz Sampling frequency: 44.1 kHz Sampling frequency: 48 kHz Sampling frequency: 48 kHz Sampling frequency: 96 kHz Signal to noise ratio, A wtd. CD Dynamic range 115 dB Total harmonic distortion, 1 kHz CD Less than 0.03 % Wow and flutter Unmeasurable (less than ±0.002 %) Analog output level, 10 kΩ COAKIAL, 75 Ω OPTICAL, 660 nm ■VIDEO SECTION Video compression, DVD Video Nord than 90 Video MPEG II Horizontal resolution Sool lines Signal to noise ratio Output level, 75 Ω OPTICAL, 660 nm Sool lines Signal to noise ratio Output level, 75 Ω ViDEO (regular, COMPOSITE) SVIDEO: Y/C COMPONENT: Y/Cr/Cb I.0 / 0.286 Vp-p COMPONENT: Y/Cr/Cb AC 100 - 240 V, 50 / 60 Hz Power supply U.S.A. and Canada AC 120 V, 60 Hz Power consumption A40 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches) Times in the xit is inches in the xit is the xit is the xit is fire inches) (17-3/8 x 4-15/16 x 13-15/16 inches)	•	
- D/A conversion	Signal read system	Semiconductor laser, wavelength 650/790 nm
Oversampling Sampling frequency : 44.1, 48 kHz / 96 kHz 8 fs, 8 fs / 4 fs ■AUDIO SECTION **Frequency response Sampling frequency : 44.1 kHz 4 Hz ~ 20 kHz Sampling frequency : 48 kHz 4 Hz ~ 22 kHz Sampling frequency : 96 kHz 4 Hz ~ 44 kHz **Signal to noise ratio, A wtd. **OD CD 115 dB **Dynamic range 16 / 20 / 24 bit More than 99 / 108 / 108 dB **Total harmonic distortion, 1 kHz ***Dess than 0.03 % ****Dess than 0.03 % **Wow and flutter Unmeasurable (less than ±0.002 %) ****OD **Analog output level 2.0 V *****OFP-POPTICAL, 660 nm 2.0 V ***COAXIAL, 75 Ω 0.5 VP-POPTICAL, 660 nm *****OFP-POPTICAL, 660 nm *****OFP-POPTICAL, 660 nm ******OFP-POPTICAL, 660 nm ******OFP-POPTICAL, 660 nm **********OFP-POPTICAL, 660 nm ************************************	■D/A CONVERSION SECTION	
Sampling frequency : 44.1, 48 kHz / 96 kHz 8 fs, 8 fs / 4 fs ■AUDIO SECTION • Frequency response Sampling frequency : 44.1 kHz 4 Hz ~ 20 kHz Sampling frequency : 96 kHz 4 Hz ~ 22 kHz Sampling frequency : 96 kHz 4 Hz ~ 44 kHz • Signal to noise ratio, A wtd. CD CD 115 dB Dynamic range 16 / 20 / 24 bit More than 99 / 108 / 108 dB • Total harmonic distortion, 1 kHz CD Less than 0.03 % • Wow and flutter Unmeasurable (less than ±0.002 %) • Analog output level, 10 kΩ 2.0 V • COAXIAL, 75 Ω 0.5 Vp-p • OPTICAL, 660 nm - 21 ~ - 15 dBm ■VIDEO SECTION • Video compression, DVD Video MPEG II • Horizontal resolution 500 lines • Signal to noise ratio More than 65 dB • Output level, 75 Ω 1.0 Vp-p • VIDEO (regular, COMPOSITE) 1.0 Vp-p • Signal format NTSC / PAL • POwer supply 1.0 Vp-p • COMPONENT : Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p • Composupplion 22 W • D	D/A conversion	24 bit
■AUDIO SECTION Frequency response Sampling frequency: 44.1 kHz	Oversampling	
Frequency response Sampling frequency: 44.1 kHz Sampling frequency: 48 kHz Sampling frequency: 96 kHz Signal to noise ratio, A wtd. CD Signal to noise ratio Signal to noise r	, •	
Frequency response Sampling frequency: 44.1 kHz Sampling frequency: 48 kHz Sampling frequency: 96 kHz Signal to noise ratio, A wtd. CD Signal to noise ratio Signal to noise r	■AUDIO SECTION	
Sampling frequency : 44.1 kHz 4 Hz ~ 20 kHz Sampling frequency : 96 kHz 4 Hz ~ 22 kHz Signal to noise ratio, A wtd.		
Sampling frequency : 48 kHz 4 Hz ~ 22 kHz Sampling frequency : 96 kHz 4 Hz ~ 44 kHz • Signal to noise ratio, A wtd. 115 dB • Dynamic range 16 / 20 / 24 bit More than 99 / 108 / 108 dB • Total harmonic distortion, 1 kHz • Less than 0.03 % • Wow and flutter Unmeasurable (less than ±0.002 %) • Analog output level, 10 kΩ 2.0 V • COAXIAL, 75 Ω 0.5 Vp-p OPTICAL, 660 nm - 21 ~ - 15 dBm ■VIDEO SECTION MPEG II • Video compression, DVD Video MPEG II • Horizontal resolution 500 lines • Signal to noise ratio More than 65 dB • Output level, 75 Ω 1.0 Vp-p • VIDEO (regular, COMPOSITE) 1.0 Vp-p • ViDEO : Y/C 1.0 / 0.286 Vp-p • COMPONENT : Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL NTSC / PAL • Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 120 V, 60 Hz • Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches) <td></td> <td> 4 Hz ~ 20 kHz</td>		4 Hz ~ 20 kHz
Sampling frequency : 96 kHz 4 Hz ~ 44 kHz Signal to noise ratio, A wtd.		
• Signal to noise ratio, A wtd. CD 115 dB • Dynamic range 16 / 20 / 24 bit More than 99 / 108 / 108 dB • Total harmonic distortion, 1 kHz Less than 0.03 % • Wow and flutter Unmeasurable (less than ±0.002 %) • Analog output level, 10 kΩ 2.0 V • Digital output level COAXIAL, 75 Ω 0.5 Vp-p • OPTICAL, 660 nm - 21 ~ - 15 dBm ■ VIDEO SECTION MPEG II • Horizontal resolution 500 lines • Signal to noise ratio More than 65 dB • Output level, 75 Ω 1.0 Vp-p • VIDEO (regular, COMPOSITE) 1.0 Vp-p • Video signal format 1.0 Vp-p • Video signal format NTSC / PAL • Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 120 V, 60 Hz • China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)		
CD 115 dB Dynamic range 16 / 20 / 24 bit More than 99 / 108 / 108 dB Total harmonic distortion, 1 kHz Less than 0.03 % Wow and flutter Unmeasurable (less than ±0.002 %) Analog output level, 10 kΩ 2.0 V Digital output level 0.5 Vp-p COAXIAL, 75 Ω 0.5 Vp-p OPTICAL, 660 nm - 21 ~ - 15 dBm VIDEO SECTION MPEG II • Horizontal resolution 500 lines Signal to noise ratio More than 65 dB • Output level, 75 Ω 1.0 Vp-p S-VIDEO (regular, COMPOSITE) 1.0 Vp-p S-VIDEO : Y/C 1.0 / 0.286 Vp-p COMPONENT : Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL • Video signal format NTSC / PAL • Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 100 - 240 V, 60 Hz China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)	. •	
- Dynamic range 16 / 20 / 24 bit - Total harmonic distortion, 1 kHz CD	,	115 dB
Total harmonic distortion, 1 kHz CD Less than 0.03 % Wow and flutter Unmeasurable (less than ±0.002 %) • Analog output level, 10 kΩ 2.0 ∨ • Digital output level COAXIAL, 75 Ω 0.5 Vp-p OPTICAL, 660 nm 21 ~ - 15 dBm ■ VIDEO SECTION • Video compression, DVD Video More than 65 dB • Output level, 75 Ω VIDEO (regular, COMPOSITE) 1.0 Vp-p S-VIDEO; Y/C 1.0 / 0.286 Vp-p COMPONENT: Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■ GENERAL • Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 120 V, 60 Hz China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)		
• Total harmonic distortion, 1 kHz Less than 0.03 % • Wow and flutter Unmeasurable (less than ±0.002 %) • Analog output level, 10 kΩ 2.0 V • Digital output level 0.5 Vp-p COAXIAL, 75 Ω 0.5 Vp-p OPTICAL, 660 nm - 21 ~ - 15 dBm ■VIDEO SECTION MPEG II • Horizontal resolution 500 lines • Signal to noise ratio More than 65 dB • Output level, 75 Ω 1.0 Vp-p • VIDEO (regular, COMPOSITE) 1.0 Vp-p • VIDEO: Y/C 1.0 / 0.286 Vp-p COMPONENT: Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL • Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 120 V, 60 Hz • Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)		More than 99 / 108 / 108 dB
CD Less than 0.03 % • Wow and flutter Unmeasurable (less than ±0.002 %) • Analog output level, 10 kΩ 2.0 V • Digital output level 0.5 Vp-p COAXIAL, 75 Ω 0.5 Vp-p OPTICAL, 660 nm - 21 ~ - 15 dBm ■VIDEO SECTION MPEG II • Horizontal resolution 500 lines • Signal to noise ratio More than 65 dB • Output level, 75 Ω 1.0 Vp-p VIDEO (regular, COMPOSITE) 1.0 Vp-p S-VIDEO : Y/C 1.0 / 0.286 Vp-p COMPONENT : Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL • Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 120 V, 60 Hz • Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)		More than 667 1667 166 ab
• Wow and flutter Unmeasurable (less than ±0.002 %) • Analog output level, 10 kΩ 2.0 V • Digital output level 0.5 Vp-p COAXIAL, 75 Ω 0.5 Vp-p OPTICAL, 660 nm - 21 ~ - 15 dBm ■VIDEO SECTION MPEG II • Video compression, DVD Video MPEG II • Horizontal resolution 500 lines • Signal to noise ratio More than 65 dB • Output level, 75 Ω 1.0 Vp-p S-VIDEO (regular, COMPOSITE) 1.0 Vp-p S-VIDEO : Y/C 1.0 / 0.286 Vp-p COMPONENT : Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 120 V, 60 Hz China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz • Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)	· · · · · · · · · · · · · · · · · · ·	Less than 0.03 %
 Analog output level, 10 kΩ Digital output level COAXIAL, 75 Ω		
 Digital output level COAXIAL, 75 Ω		· — ,
COAXIAL, 75 Ω 0.5 Vp-p OPTICAL, 660 nm - 21 ~ - 15 dBm ■VIDEO SECTION MPEG II • Video compression, DVD Video MPEG II • Horizontal resolution 500 lines • Signal to noise ratio More than 65 dB • Output level, 75 Ω 1.0 Vp-p VIDEO (regular, COMPOSITE) 1.0 / 0.286 Vp-p COMPONENT : Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL • Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 120 V, 60 Hz China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz • Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)		2.0 V
■VIDEO SECTION • Video compression, DVD Video MPEG II • Horizontal resolution 500 lines • Signal to noise ratio More than 65 dB • Output level, 75 Ω 1.0 Vp-p S-VIDEO (regular, COMPOSITE) 1.0 / 0.286 Vp-p COMPONENT: Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL • Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 120 V, 60 Hz China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz • Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)	•	0.5 Vn-n
■VIDEO SECTION • Video compression, DVD Video	,	• •
 Video compression, DVD Video Horizontal resolution Signal to noise ratio More than 65 dB Output level, 75 Ω VIDEO (regular, COMPOSITE) S-VIDEO: Y/C COMPONENT: Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL Video signal format Power supply U.S.A. and Canada AC 120 V, 60 Hz China, Europe, Australia and other countries Power consumption 22 W Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches) 	Of HOAL, 600 Hill	- 21 % - 13 dbiii
 Horizontal resolution 500 lines Signal to noise ratio More than 65 dB Output level, 75 Ω VIDEO (regular, COMPOSITE) 1.0 Vp-p S-VIDEO: Y/C 1.0 / 0.286 Vp-p COMPONENT: Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL Video signal format NTSC / PAL Power supply U.S.A. and Canada AC 120 V, 60 Hz China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz Power consumption 22 W Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches) 	■VIDEO SECTION	
 Signal to noise ratio More than 65 dB Output level, 75 Ω VIDEO (regular, COMPOSITE) 1.0 Vp-p S-VIDEO: Y/C 1.0 / 0.286 Vp-p COMPONENT: Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL Video signal format NTSC / PAL Power supply U.S.A. and Canada AC 120 V, 60 Hz China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz Power consumption 22 W Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches) 	·	
 Output level, 75 Ω VIDEO (regular, COMPOSITE)		
VIDEO (regular, COMPOSITE) 1.0 Vp-p S-VIDEO : Y/C 1.0 / 0.286 Vp-p COMPONENT : Y / Cr / Cb 1.0 / 0.7 / 0.7 Vp-p ■GENERAL • Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 120 V, 60 Hz China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz • Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)	Signal to noise ratio	More than 65 dB
S-VIDEO: Y/C	 Output level, 75 Ω 	
■GENERAL • Video signal format NTSC / PAL • Power supply U.S.A. and Canada AC 120 V, 60 Hz China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz • Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)	, ,	·
■GENERAL • Video signal format		
 Video signal format Power supply U.S.A. and Canada	COMPONENT: Y / Cr / Cb	1.0 / 0.7 / 0.7 Vp-p
 Power supply U.S.A. and Canada	■GENERAL	
 Power supply U.S.A. and Canada	Video signal format	NTSC / PAL
U.S.A. and Canada AC 120 V, 60 Hz China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz • Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)		
China, Europe, Australia and other countries AC 100 - 240 V, 50 / 60 Hz • Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)	· · ·	AC 120 V. 60 Hz
• Power consumption 22 W • Dimension (W x H x D) 440 x 126 x 355 mm (17-3/8 x 4-15/16 x 13-15/16 inches)		
• Dimension (W x H x D)		
(17-3/8 x 4-15/16 x 13-15/16 inches)		
·	· , · · · · · · · · · · · · · · · · · ·	
	Weight (Net)	· · · · · · · · · · · · · · · · · · ·

Note: Design and specifications are subject to change without notice for improvements.

Code	Language	Code	Language	Code	Language	Code	Language
1027	Afar	1186	Scots Gaelic	1350	Malayalam	1513	Siswati
1028	Abkhazian	1194	Galician	1352	Mongolian	1514	Sesotho
1032	Afrikaans	1196	Guarani	1353	Moldavian	1515	Sundanese
1039	Amharic	1203	Gujarati	1356	Marathi	1516	Swedish
1044	Arabic	1209	Hausa	1357	Malay	1517	Swahili
1045	Assamese	1217	Hindi	1358	Maltese	1521	Tamil
1051	Aymara	1226	Croatian	1363	Burmese	1525	Tegulu
1052	Azerbaijani	1229	Hungarian	1365	Nauru	1527	Tajik
1053	Bashkir	1233	Armenian	1369	Nepali	1528	Thai
1057	Byelorussian	1235	Interlingua	1376	Dutch	1529	Tigrinya
1059	Bulgarian	1239	Interlingue	1379	Norwegian	1531	Turkmen
1060	Bihari	1245	Inupiak	1393	Occitan	1532	Tagalog
1066	Bengali ; Bangla	1248	Indonesian	1403	(Afan) Oromo	1534	Setswana
1067	Tibetan	1253	Icelandic	1408	Oriya	1535	Tonga
1069	Bislama	1254	Italian	1417	Punjabi	1538	Turkish
1070	Breton	1257	Hebrew	1428	Polish	1539	Tsonga
1079	Catalan	1261	Japanese	1435	Pashto ; Pushto	1540	Tatar
1093	Corsican	1269	Yiddish	1436	Portuguese	1543	Twi
1097	Czech	1283	Javanese	1463	Quechua	1557	Ukrainian
1103	Welsh	1287	Georgian	1481	Rhaeto-Romance	1564	Urdu
1105	Danish	1297	Kazakh	1482	Kirundi	1572	Uzbek
1109	German	1298	Greenlandic	1483	Romanian	1581	Vietnamese
1130	Bhutani	1299	Cambodian	1489	Russian	1587	Volapük
1142	Greek	1300	Kannada	1491	Kinyarwanda	1613	Wolof
1144	English	1301	Korean	1495	Sanskrit	1632	Xhosa
1145	Esperanto	1305	Kashmiri	1498	Sindhi	1665	Yoruba
1149	Spanish	1307	Kurdish	1501	Sangro	1684	Chinese
1150	Estonian	1311	Kirghiz	1502	Serbo-Croatian	1697	Zulu
1151	Basque	1313	Latin	1503	Singhalese		
1157	Persian	1326	Lingala	1505	Slovak		
1165	Finnish	1327	Laothian	1506	Slovenian		
1166	Fiji	1332	Lithuanian	1507	Samoan		
1171	Faeroese	1334	Latvian ; Lettish	1508	Shona		
1174	French	1345	Malagasy	1509	Somali		
1181	Frisian	1347	Maori	1511	Albanian		
1183	Irish	1349	Macedonian	1512	Serbian		